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EXAMINER

KLIMOWICZ, WILLIAM JOSEPH

ART UNIT	PAPER NUMBER
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2627

DATE MAILED: 04/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/643,867	Applicant(s) CHOI, UN-JIN	
	Examiner William J. Klimowicz	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

Claim 11 is objected to because of the following informalities:

With regard to claim 11 (line 3), the word “slim” should be deleted in order to remain consistent with the preceding claim language.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al. (US 2001/0026520 A1) in view of Nakajima (JP 11-339459 A).

As per claims 1 and 11, Watanabe et al. (US 2001/0026520 A1) discloses an optical disc drive (1) comprising: a deck (tray (2)) having a protrusion (see FIG. 4, lower extending portion of (2))) on which a spindle motor (6) that rotates an optical disc (3) and an optical pickup (5) sliding along a radial direction of the optical disc drive (1) are mounted; a lower case (10), that the deck (2) slides into and out of.

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Additionally, as per claim 11, the optical disc drive (1) includes the lower case, having an upper and a lower surface - see FIG. 1, including a main control board (13) controlling the operation of the slim optical disc drive (1), wherein the deck (2) which slides in and out of the lower case occupying a volume of protruding space in which a spindle motor (6) and an optical pickup (5) are mounted.

As per claims 7 and 20, further comprising: a flexible printed circuit (15) that curves as the deck (2) slides into and out of the lower case (10) (via fold in the FPC)); and dynamically connects electrical parts including the optical pickup (5) installed on the deck (2) to a main control board (e.g., 13) installed in the lower case (10), wherein a portion of the flexible printed circuit is fixed to the base.

As per claims 8, 21 and 23 wherein the flexible printed circuit (15) is U-shaped (via bend, that is FPC lies along the base (10a) and extends away from PCB (13) toward tray (2), then prior to coupling to tray, is curved back in the plane of base (10a) toward the circuit board (13), and then is bent out of the plane of (10a) to connect to the tray (2) and its associated electrical components as is depicted and as is known), and comprises a first connecting part (connection part of FPC and interfaces with tray to couple signals to spindle, pickup, etc., as is known) connected to the deck (2) and a second connecting part, connected to the main control board (connection part of FPC and interfaces with PCB (13), as is known), fixed to the bottom.

As per claim 22, wherein the first connecting part comprises connections to the spindle motor (6), the driving motor (motor for moving (5) radially), and the optical pickup (5) (signals via the laser) in order to make the device operable as intended.

As per claims 1 and 11, however, Watanabe et al. (US 2001/0026520 A1) does not expressly disclose wherein the lower case has a penetration corresponding to the protrusion, mounting a spindle motor and optical pickup; and a cover that covers the penetration, wherein the volume of protruding space fits within the penetration.

Nakajima (JP 11-339459 A), however, discloses an analogous optical disc drive, wherein a lower case (1) has a penetration (see FIG. 1) corresponding to a protrusion of a spindle motor (7) and optical pickup (10), wherein a cover (2) is provided which covers the penetration, wherein the volume of protruding space fits within the penetration.

As per claim 2, Nakajima (JP 11-339459 A) further discloses wherein the cover (2) covers the penetration so that a lower surface of the cover (2) does not protrude to a lower surface of the lower case (1) (e.g., it is mounted on the exterior outside thereof).

As per claims 3 and 12, Nakajima (JP 11-339459 A) further discloses wherein the cover (2) includes a plate that is thinner than the lower case (1) - see FIG. 1.

As per claim 4, Nakajima (JP 11-339459 A) further discloses wherein the penetration (large hole within (1) as seen in FIG. 1) comprises a placing part that is prepared at the edge of the penetration and has a lower surface recessed by a thickness of the lower case from the lower surface of the lower case (e.g., see four corners of (1) in FIG. 1).

As per claim 13, Nakajima (JP 11-339459 A) further discloses wherein the lower surface of the cover (2) does not extend lower than a lower surface of the lower case (e.g., just flip the device of Figure 1 upside down).

As per claim 14, Nakajima (JP 11-339459 A) further discloses further comprising a placing part (e.g., a portion of (2) that is capable of being affixed to (1)), having an upper and a

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lower surface, along an edge of the penetration, transversely extending from the edge of the protrusion - see FIG. 1.

As per claim 15, Nakajima (JP 11-339459 A) further discloses wherein the upper surface of the placing part is level with the upper surface of the lower case (1) - e.g., just flip the device of FIG. 1 upside down.

As per claim 16, Nakajima (JP 11-339459 A) further discloses wherein the upper surface of the placing part is lower than the upper surface of the lower case - see FIG. 1, right-side up.

As per claim 17, Nakajima (JP 11-339459 A) further discloses wherein the lower surface of the placing part is lower than the upper surface of the lower case by a thickness of the cover - see FIG. 1.

As per claim 18, wherein the lower surface of the placing part is formed higher than the lower case by the thickness of an adhesive *when* the cover is adhered onto the placing part.

Note that not only is claim 18 include a product-by-process limitation (i.e., “adhered,” is also includes a conditional limitation “*when* the cover is adhered onto the placing part,” which is not a positive limitation in that the event is not required to have taken place).

As it pertains to claims 5, 6 and 19, the product by process limitations in these claims (e.g., “wherein the cover is adhered onto the placing part,” and “wherein the cover is fixed onto the placing part by spot welding”) are directed to the product *per se*, no matter how actually made, *In re Hirao*, 190 USPQ 15 at 17(footnote 3). See also *In re Brown*, 173 USPQ 685; *In re Luck*, 177 USPQ 523; *In re Fessman*, 180 USPQ 324; *In re Avery*, 186 USPQ 161; *In re Wertheim*, 191 USPQ 90 (209 USPQ 554 does not deal with this issue); *In re Marosi et al*, 218

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USPQ 289; and particularly *In re Thorpe*, 227 USPQ 964, all of which make it clear that it is the patentability of the final structure of the product “gleaned” from the process limitations or steps, which must be determined in a “product by process” claim, and not the patentability of the process limitations. Moreover, an old or obvious product produced by a new method is not a patentable product, whether claimed in “product by process” claims or not. Note that the applicant has the burden of proof in such cases, as the above case law makes clear.

Given the express teachings and motivations, as espoused by Nakajima (JP 11-339459 A), it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the lower case of Watanabe et al. (US 2001/0026520 A1) with a penetration (see FIG. 1) corresponding to a protrusion of a spindle motor (7) and optical pickup (10), wherein a cover (2) is provided which covers the penetration, as expressly disclosed by Nakajima (JP 11-339459 A), including fixing the FPC to the bottom base cover thereof.

The rationale is as follows: one of ordinary skill in the art would have been motivated to provide the lower case of Watanabe et al. (US 2001/0026520 A1) with a penetration (see FIG. 1) corresponding to a protrusion of a spindle motor (7) and optical pickup (10), wherein a cover (2) is provided which covers the penetration, including fixing the FPC to the bottom base cover thereof, as expressly disclosed by Nakajima (JP 11-339459 A) in order to thin a base chassis and thus reduce the device size, without deforming the base chassis, as explicitly suggested by Nakajima (JP 11-339459 A) - see abstract of Nakajima (JP 11-339459 A).

Additionally, as per claims 9, 10, 24 and 25, although Watanabe et al. (US 2001/0026520 A1), as applied to Nakajima (JP 11-339459 A), does not expressly states wherein the optical pickup serves to reproduce data from a CD-ROM and records data on and reproduces data from

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a CD-RW or to reproduce data from a CD-ROM, record data on and reproduce data from a CD-R, and reproduce data from a DVD, Watanabe et al. (US 2001/0026520 A1) does indeed suggest such a reproduction and recording use of such discs, e.g., see paragraph [0046], whereby the disc can be “recorded” to.

Official notice is taken that CD-R, CD-ROMs and DVDs are notoriously old and well known and ubiquitous in the art; such Officially noticed fact being capable of instant and unquestionable demonstration as being well-known.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the device of Watanabe et al. (US 2001/0026520 A1), as applied to Nakajima (JP 11-339459 A), be capable of serving CD-Rs, CD-ROMS, CD-RWs and DVDs as is well known in the art.

The rationale is as follows: one of ordinary skill in the art would have been motivated to have the device of Watanabe et al. (US 2001/0026520 A1), as applied to Nakajima (JP 11-339459 A), be capable of serving CD-Rs, CD-ROMS, CD-RWs and DVDs as is well known in the art in order to be able to read high density discs with large capacity (e.g., DVDs) while also being able to record information onto a CD (e.g., CD-Rs and CD-RWs) as is well known, established and appreciated in the art.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 and 11-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Watanabe et al. (US 2001/0026520 A1).

As broadly set forth in claim 1, Watanabe et al. (US 2001/0026520 A1) discloses an optical disc drive (1) comprising: a deck (tray (2)) having a protrusion (see FIG. 4, lower extending portion of (2))) on which a spindle motor (6) that rotates an optical disc (3) and an optical pickup (5) sliding along a radial direction of the optical disc drive (1) are mounted; a lower case (10), that the deck (2) slides into and out of, having a penetration (internal space of (10) into which tray (2) slides) corresponding to the protrusion; and a cover (11) that covers the penetration (i.e., when the tray (2) is fully inserted into drive (10)).

As broadly set forth in claim 11, Watanabe et al. (US 2001/0026520 A1) discloses an optical disc drive (1), comprising: a lower case (10), having an upper and a lower surface (top and bottom side), including a main control board (13) controlling the operation of the slim optical disk drive, and a penetration (receiving space (10a) into which tray (2) is inserted); a deck (2) which slides in and out of the lower case (10) occupying a volume of protruding space in which a spindle motor (6) and an optical pickup (5) are mounted; and a cover (11) covering the penetration, wherein the volume of protruding space fits within the penetration (i.e., when the tray (2) is fully inserted into drive (10)).

As per claim 2, wherein the cover (11) covers the penetration so that a lower surface (e.g., internal; surface of (11)) of the cover (11) does not protrude to a lower surface of the lower case (10).

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As per claims 3 and 12 wherein the cover (11) comprises a plate that is thinner than the lower case (10) (at least in the dimension shown in FIG. 1.

As per claim 13 wherein the lower surface of the cover does not extend lower than a lower surface of the lower case - flip FIG. 1 upside down.

Claims 9, 10, 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al. (US 2001/0026520 A1).

Additionally, as per claims 9, 10, 24 and 25, although Watanabe et al. (US 2001/0026520 A1) does not expressly states wherein the optical pickup serves to reproduce data from a CD-ROM and records data on and reproduces data from a CD-RW or to reproduce data from a CD-ROM, record data on and reproduce data from a CD-R, and reproduce data from a DVD, Watanabe et al. (US 2001/0026520 A1) does indeed suggest such a reproduction and recording use of such discs, e.g., see paragraph [0046], whereby the disc can be “recorded” to.

Official notice is taken that CD-R, CD-ROMs and DVDs are notoriously old and well known and ubiquitous in the art; such Officially noticed fact being capable of instant and unquestionable demonstration as being well-known.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the device of Watanabe et al. (US 2001/0026520 A1) be capable or serving CD-Rs, CD-ROMS, CD-RWs and DVDs as is well known in the art.

The rationale is as follows: one of ordinary skill in the art would have been motivated to have the device of Watanabe et al. (US 2001/0026520 A1) be capable or serving CD-Rs, CD-ROMS, CD-RWs and DVDs as is well known in the art in order to be able to read high density

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discs with large capacity (e.g., DVDs) while also being able to record information onto a CD (e.g., CD-Rs and CD-RWs) as is well known, established and appreciated in the art.

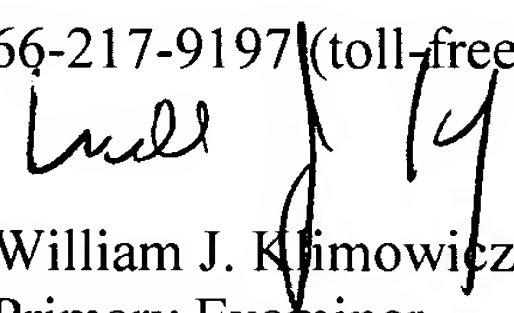
Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William J. Klimowicz whose telephone number is (571) 272-7577. The examiner can normally be reached on Monday-Thursday (6:30AM-5:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Thi Nguyen can be reached on (571) 272-7579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


William J. Klimowicz
Primary Examiner
Art Unit 2627

WJK